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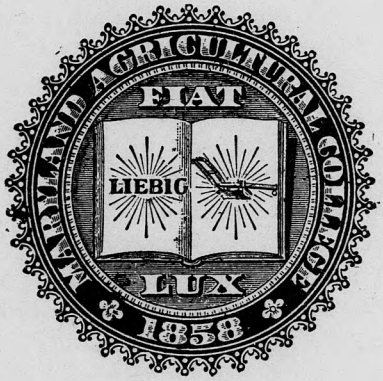

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Issued in the Months of February, May, August and November.

ADDRESS

Chemical Department, Maryland Agricultural College,

COLLEGE PARK, MD.

ANALYSIS OF

Commercial Feeding Stuffs Sold in Maryland

BY THE CHEMICAL DEPARTMENT OF

THE MARYLAND AGRICULTURAL COLLEGE.

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This bulletin contains the analyses of 102 samples of feed stuffs which have been obtained since November, 1906.

The analyses are not complete, but show the percentage of protein and fat, which is sufficient for ordinary purposes, as the quality of the feed may be readily judged from these constituents, the most important of which is the protein.

Protein is the nitrogenous part of the feed and is absolutely necessary to build muscle, sinews, nerves, hair, feathers, etc., in fact, enters into the composition of all essential parts of the body.

Fat can only serve as a fuel or energy producer, or to build fatty tissue, which is only a reserve fuel supply for the animal, whatever it may be. Protein may also serve as an energy producer and may be used to form fat, but the use for such purposes is not profitable.

It should be remembered that in materials very low in protein, as straw, corn bran, oat hulls, peanut hulls, etc., a smaller percentage of the protein is digestible than is the case with high-grade feeds.

This department wishes to have the cooperation of feeders and dealers in the inspection of concentrated feeds and will be glad to analyze samples, provided samples of the same feeds have not been recently analyzed in the department. Before sending samples write for blanks and instructions. We will not analyze samples of medicines, "condition powders," condimental feeds, or the so-called "feeds" that are "five feeds for a cent" to be mixed with the regular feed. Careful experiments at a number of the experiment stations have proved that these medicinal "feeds" are of no practical value.

POISONOUS FEED.

Our attention has recently been called to eight or ten cases of poisoning of poultry by feeding stuff sold as "middlings." All of the cases were traced to one lot of feed which the dealer said was wheat meal, or ground whole wheat that was unfit for flour. Our examination of the feed indicated that it was ground screenings containing considerable cockle, probably as much as 20 per cent.

When unground screenings are fed to poultry the birds seem to instinctively refuse to eat the cockle.

The presence of cockle in the ground feed is indicated by its black hull, the characteristic markings of which are readily recognized by the aid of a simple lens or microscope.

In the cases reported to us from 20 to 70 per cent of the flocks were found dead in the morning, after giving them the new feed the previous evening.

Several trials of some of this feed at the laboratory, on cooped fowls, were without result, as the birds persistently refused to eat the feed.

The poisonous character of cockle has been pointed out by Chestnut in Farmers' Bulletin No. 86, U. S. Dep't of Agriculture.

ANALYSES OF FEEDING STUFFS.

No.	Name of Manufacturer or Agent.	Name of Feeding Stuff.	Place of Sampling.	Protein.		Fat or Ether Extract.	
				Found.	Guaranteed.	Found.	Guaranteed.
13296	The Armour Fertilizer Works, Baltimore, Md.	Meat Meal.....	Hancock.....	68.20	55.00	16.40	12.00
13247	The Weuchet Fertilizer Co., Dayton, Ohio.	Ground Beef Scrap.....	Baltimore.....	67.04	50.00	12.85	9.00
13208	Baugh & Sons Co., Baltimore, Md.	Meat Meal for Poultry....	Baltimore.....	66.32	57.00	13.37	16.00
13259	Geo. L. Harding, Binghamton, N. Y.	High Grade Beef Scrap...	Hagerstown.....	49.54	43.00	17.04	25.00
13291	Darling & Co. Chicago, Ill.....	Beef Meal for Poultry....	Baltimore.....	41.96	45.00	14.82	10.00
13253	Wm. H. Bixler, Hagerstown, Md.	Meat and Bone-Chicken Feed.	Hagerstown.....	26.86	.....	10.81	.....
13254	Sam'l Brubaker & Co., Lancaster, Pa.	Bone and Meat Mixture ..	Frederick.....	23.60	.....	10.25	.....
13261	G. H. Lee Co., Omaha, Neb....	Egg Maker and Chick Grower.	Frederick.....	36.10	.....	3.33	.....
13232	The H-O Co., Buffalo, N. Y....	Algrane Poultry Mash....	Baltimore.....	18.20	17.00	6.00	5.50
13287	American Milling Co., Philadelphia, Pa.	Sucrene Poultry Feed....	Silver Springs.....	17.60	17.50	5.78	5.50
13236	Purina Mills, St. Louis, Mo.....	Purina Mash makes Hens Lay.	Baltimore.....	16.85	.....	4.08	.....
13276	Cyphers Incubator Co., Buffalo, N. Y.	Laying Food.....	Baltimore.....	16.32	17.31	4.06	3.80
13258	Geo. L. Harding, Binghamton, N. Y.	Egg Builder Ration.....	Hagerstown.....	14.30	12.00	3.68	5.00
13256	Sam'l Brubaker & Co., Lancaster, Pa.	Mash Egg Food.	Frederick.....	14.22	.....	3.83	.....

caster, Pa.

13239	Wm. G. Scarlett & Co., Baltimore, Md.	Oriole Brand High Grade Poultry Food.	Baltimore	14.04	10.71	4.21	4.41
13279	American Cereal Co., Chicago, Ill.	American Poultry Food...	From Manufacturer.	13.16	12.00	5.65	3.50
13217	F. P. Cassel, Lansdale, Pa.....	F. P. C. Chick Manna....	Baltimore	12.90	12.00	4.61	4.00
13221	Cyphers Incubator Co., Buffalo, N. Y.	Chick Food.....	Baltimore	12.18	10.54	3.08	3.40
13225	Cyphers Incubator Co., Buffalo, N. Y.	Pigeon Food.....	Baltimore	12.02	.....	3.18	.....
13260	Geo. L. Harding, Binghamton, N. Y.	Uncle Sam Baby Chick Food.	Hagerstown.....	11.94	12.00	3.44	5.00
13223	Cyphers Incubator Co., Buffalo, N. Y.	Forcing Food.....	Baltimore	11.85	12.89	4.18	4.40
13234	The H-O Co., Buffalo, N. Y....	Paragon Scratching Feed.	Baltimore	11.76	.....	3.65	.....
13237	Purina Mills, St. Louis, Mo.....	Purina Mill Feed Chick Size.	Baltimore	11.62	11.00	3.61	3.60
13218	Corno Mills Co., East St. Louis, Ill.	Corno Chick Feed.....	Baltimore	11.50	10.00	3.31	3.50
13226	Cyphers Incubator Co., Buffalo, N. Y.	Scratching Food.....	Baltimore	11.32	10.78	3.12	3.39
13213	Bolgiano's Seed Store, Baltimore, Md.	Square Deal Pigeon Food.	Baltimore	11.23	11.06	4.95	4.44
13219	Corno Mills, East St. Louis, Ill.	Corno Hen Feed.....	Baltimore	11.18	10.00	2.85	3.70
13215	Bolgiano's Seed Store, Baltimore, Md.	Square Deal Poultry Mash.	Baltimore	11.06	11.02	3.32	3.64
13214	Bolgiano's Seed Store, Baltimore, Md.	Square Deal Poultry Food.	Baltimore	11.06	11.50	4.28	3.87
13257	Albert Dickinson Co., Chicago, Ill.	King Brand Pigeon Food.	Hagerstown.....	10.88	10.50	2.87	2.50
13238	Purina Mills, St. Louis, Mo.....	Purina Mill Feed Scratch Size.	Baltimore	10.71	11.00	3.30	3.60
13222	Cyphers Incubator Co., Buffalo, N. Y.	Developing Food.....	Baltimore	10.39	10.00	3.10	3.72
13240	Wm. G. Scarlett & Co., Baltimore, Md.	Shield Brand High Grade Chick Feed.	Baltimore	10.09	9.56	4.61	3.64
13212	Bolgiano's Seed Store, Baltimore, Md.	Square Deal Chick Starter.	Baltimore	10.00	9.48	4.23	4.14
13211	Bolgiano's Seed Store, Baltimore, Md.	Square Deal Chick Food..	Baltimore	9.74	10.01	3.92	3.89

ANALYSES OF FEEDING STUFFS.

No.	Name of Manufacturer or Agent.	Name of Feeding Stuff.	Place of Sampling.	Protein.		Fat or Ether Extract.	
				Found.	Guaranteed.	Found.	Guaranteed.
13255	Sam'l Brubaker & Co., Lancaster, Pa.	Hen Food	Frederick	9.74	.....	2.58	.....
13275	Albert Dickinson Co., Chicago, Ill.	Crescent Chick Feed	Baltimore	8.90	10.50	2.65	3.00
13290	The Hunter Bros. Milling Co., St. Louis, Mo.	Prime Cotton Seed Meal.	Silver Springs	42.05	41.00	9.30	9.00
13202	The American Cotton Oil Co., New York, N. Y.	Prime Cotton Seed Meal.	Baltimore	41.24	41.00	9.95	9.00
13288	Chapin & Co., Philadelphia, Pa.	Green Diamond Brand Choice Cotten Seed Meal.	Gaithersburg	40.88	41.00	9.01	9.00
13272	Roberts Ruffin Co., Memphis, Tenn.	Eagle Brand Cotton Seed Meal.	Tyrone	40.54	41.00	10.20	9.00
13243	Southern Cotton Oil Co., Charlotte, N. C.	First Grade Cotten Seed Meal.	Baltimore	40.36	41.16*	6.73	.....
13270	Humphreys, Godwin & Co., Memphis, Tenn.	Dixie Brand Cotton Seed Meal.	Frizellburg	40.18	41.00	8.45	9.00
13241	C. S. Schermerhorn & Son, Baltimore, Md.	Prime Cotton Seed Meal.	Baltimore	40.10	38.61	8.54	.....
13242	Southern Cotton Oil Co., Charlotte, N. C.	Cotton Seed Meal	Baltimore	39.62	38.52†	7.83	.....
13191	W. B. Johnson & Co., Memphis, Tenn.	Prime Cotton Seed Meal.	Westminster	39.58	41.00	10.35	.....
13207	W. P. Battle & Co., Memphis, Tenn.	"Battle Brand" Prime Cotton Seed Meal.	Baltimore	39.20	43.00	9.08	9.00
13264	Richmond & Bond Co., Hickman, Ky.	Cotton Seed Meal	Frederick	38.92	.....	8.53	.....
13190	W. B. Johnson & Co., Memphis, Tenn.	Prime Cotton Seed Meal.	Westminster	38.81	41.00	9.26	.....

Tenn.							

13216	F.W. Brode & Co., Memphis, Tenn.	"Owl Brand" Pure Cotton Seed Meal.	Baltimore	38.71	41.00	9.87	7.00
13293	J. Lindsay Wells Co., Memphis, Tenn.	Cotton Seed Meal	Street	38.62	41.00	11.17	9.00
13195	N. C. Cotton Oil Co., Henderson, N. C.	Prime Cotton Seed Meal	Gaithersburg	38.20	38.61	8.40	8.00
13198	W. B. Johnson & Co., Memphis, Tenn.	Prime Cotton Seed Meal	Westminster	38.08	41.00	10.64	.....
13269	H. E. Bridges & Co., Memphis, Tenn.	Cotton Seed Meal	New Windsor	37.74	41.00	8.58	9.00
13278	Metzgar Seed & Oil Co., Toledo, Ohio.	Old Process Oil Meal	From Manufacturer.	39.04	30.00	7.35	5.00
13295	Thompson & Company, Allegheny, Pa.	Oil Meal as Stock Feed	Cumberland	36.68	32.00	7.08	5.50
13284	Midland Linseed Co., Minneapolis, Minn.	Old Process Ground Linseed Cake.	From Manufacturer.	36.00	30.00	7.44	5.50
13203	American Linseed Co., New York, N. Y.	Old Process Oil Meal	Baltimore	34.92	32.00	7.35	5.00
13210	Blatchford's Calf Meal Factory, Waukegan, Ill.	Blatchford's Calf Meal	Baltimore	27.38	25.00	4.72	5.00
13263	J. W. Myers & Co. Hagerstown, Md.	Pure Ground Flax Seed, (Unpressed.)	Hagerstown	21.06	.....	32.57	.....
13292	J. W. Biles & Co., Cincinnati, Ohio.	XXXX Forex Grains	Rocks	30.10	33.00	12.22	11.00
13193	Chas. A. Krause Grain Co., Milwaukee. Wis.	Eagle Grains	Cardiff.	27.73	26.00	12.36	9.00
13194	Chas. A. Krause Grain Co., Milwaukee, Wis.	Eagle Grains	Cardiff	23.25	26.00	9.14	9.00
13192	Chas. A. Krause Grain Co., Milwaukee, Wis.	Distillers Grains	Whiteford	23.43	33.00	11.41	11.00
13285	Dairy Feed Co., Cockeysville, Md.	Dried Distillers Grains	Cockeysville	17.55	18.00	10.60	10.00
13268	Corn Products Refining Co., New York, N. Y.	Gluten Feed	Sparrows Point	26.50	24.00	3.01	2.50
13204	American Milling Co., Philadelphia. Pa.	Sucrene Dairy Feed	Baltimore	18.52	16.50	5.60	3.50
13235	E. P. Mueller, Milwaukee, Wis.	Mueller's Molasses Grains	Baltimore	18.43	19.81	3.10	2.73
13267	Western Grain Products Co., Milwaukee, Wis.	Hammond's Dairy Feed.	Frederick	17.68	17.00	5.42	3.50

*Guaranteed 8% Ammonia, which equals Protein 41.16%
†Guaranteed 7½% Ammonia, which equals Protein 38.52%

ANALYSES OF FEEDING STUFFS.

No.	Name of Manufacturer or Agent.	Name of Feeding Stuff.	Place of Sampling.	Protein.		Fat or Ether Extracts.	
				Found.	Guaranteed.	Found.	Guaranteed.
13196	Western Grain Products Co., Milwaukee, Wis.	Hammond's Dairy Feed..	Gaithersburg.....	17.50	17.00	7.50	3.50
13280	American Cereal Co., Chicago, Ill.	Buckeye Mixed Feed.....	From Manufacturer	15.88	15.00	5.11	4.00
13231	The H-O Co., Buffalo, N. Y....	Algrane Milk Feed.....	Baltimore.....	14.60	14.00	4.10	4.00
13266	Western Dairy Feed Co., Milwaukee, Wis.	Red Cow Dairy Feed.....	Frederick.....	14.48	17.50	3.96	3.50
13248	American Cereal Co., Chicago, Ill.	Quaker Dairy Feed.....	Hagerstown.....	12.95	12.00	3.76	3.00
13251	American Milling Co., Philadelphia, Pa.	Sucrene Horse Feed.....	Hagerstown.....	13.08	13.50	3.95	3.50
13233	The H-O Co., Buffalo, N. Y....	H-O Horse Feed.....	Baltimore.....	12.60	12.00	5.04	4.50
13205	American Milling Co., Philadelphia, Pa.	Sucrene Horse, Mule and Ox Feed.	Baltimore.....	12.50	10.00	4.66	3.00
13245	Rich'd C. Wells & Co., Baltimore, Md.	O-O Store Feed.....	Baltimore.....	10.97	.....	5.16	.....
13249	American Cereal Co., Chicago, Ill.	Schumacher's Stock Feed	Hagerstown.....	10.62	11.00	4.28	4.00
13294	The Great Western Cereal Co., Chicago, Ill.	Sterling Stock Feed.....	Cumberland.....	10.53	12.50	3.20	4.50
13244	Rich'd C. Wells & Co., Baltimore, Md.	C-C Store Feed.....	Baltimore.....	9.74	.....	4.62	.....
13286	The Great Western Cereal Co., Chicago, Ill.	Boss Corn and Oat Feed..	Cockeysville.....	8.90	8.50	.10	3.50
13227	J. M. Frisch & Co., Baltimore, Md.	King Corn and Oat Feed..	Baltimore.....	8.86	8.00	3.27	4.00

	Md.						
13289	The H-O Company, Buffalo, N. Y.	Jim Dandy Oat Feed.....	Silver Springs.....	8.64	7.50	3.58	2.75
13283	The H-O Company, Buffalo, N. Y.	De Fi Corn and Oat Feed.	From Manufacturer	8.38	8.00	3.35	3.00
13277	C. S. Schermerhorn & Son, Baltimore, Md.	Corn and Oat Chop.....	Baltimore.....	8.34	.....	3.54	.....
13250	American Cereal Co., Chicago, Ill.	Victor Corn and Oat Feed	Hagerstown.....	8.02	7.50	4.45	3.00
13229	The Great Western Cereal Co., Chicago, Ill.	Boss Chop Feed.....	Baltimore.....	7.81	8.50	4.10	3.50
13282	The H-O Company, Buffalo, N. Y.	Jim Dandy Oat Feed.....	From Manufacturer	7.55	7.50	3.07	2.75
13230	The Great Western Cereal Co., Chicago, Ill.	Royal Oat Feed	Baltimore.....	6.84	7.80	2.94	2.80
13281	American Cereal Co., Chicago, Ill.	Vim or "X" Feed.....	From Manufacturer	5.13	5.50	2.03	2.00
13274	Washburn-Crosby Co., Indianapolis, Ind.	Standard Middlings.....	Hampstead.....	16.76	17.00	5.63	4.00
13252	Berger-Cryttenden Milling Co., Milwaukee, Wis.	Badger Red Dog	Frederick	15.36	18.00	3.38	4.00
13246	A. K. Williams Ijamsville, Md.	White Middlings, No. 1...	Baltimore.....	13.67	.....	2.56	.....
13262	Listman Mill Co., LaCrosse, Wis.	Elmco Fancy Bran	Frederick	16.76	15 75	4.98	4.73
13273	Washburn-Crosby Co., Indianapolis, Ind.	Coarse Bran.....	Union Bridge.....	14.57	15.00	4.47	4.00
13271	M. F. Baringer, Philadelphia, Pa.	Keystone Hominy Chop ..	Linwood.....	12.11	10.50	9.58	7.90
13206	Baltimore Pearl Hominy Co., Baltimore, Md.	Hominy Chop.....	Baltimore.....	8.69	.....	5.31	.....
13228	C. A. Gambrill Manufacturing Co., Baltimore, Md.	Corn Bran.....	Baltimore.....	9.39	.....	5.50	.....
13265	D. A. Stickell, Hagerstown, Md.	Corn Bran.....	Hagerstown.....	9.04	.....	5.38	.....
13209	Bay City, Michigan, Sugar Co., Bay City, Mich.	Dried Sugar Beet Pulp for Stock Feed.	Baltimore.....	9.13	11.78	.84	1.64
13197	Bay City, Michigan, Sugar Co., Bay City, Mich.	Dried Sugar Beet Pulp for Stock Feed.	Gaithersburg.....	8.78	11.78	.92	1.64

Twenty of the feeds in the preceding table are composed of whole or cracked grains, in some cases with the addition of grit, oyster shell, charcoal, etc., and the composition is apparent on inspection.

The folloiwng is a list of these feeds, with the principal ingredients:

No. 13211—Granulated corn, a little granulated wheat, millet, oat kernels and mustard seed.

No. 13212—Largely granulated corn, with a little granulated wheat, mustard seed and millet.

No. 13213—Cracked corn, wheat, millet, Kaffir corn, flaxseed and peas.

No. 13214—Cracked corn, wheat, Kaffir corn, oats and cracked peas.

No. 13218—Granulated corn, millet, cracked wheat, cracked Kaffir corn, grass and mustard seed, etc.

No. 13219—Cracked corn, wheat, Kaffir corn, sunflower seed, etc.

No. 13221—Granulated corn, wheat, millet, Kaffir corn, etc.

No. 13222—Kaffir corn, cracked corn, millet, wheat, buckwheat, etc.

No. 13225—Kaffir corn, wheat, cracked corn, hemp-seed, millet and peas.

No. 13226—Cracked corn, oats, Kaffir corn, wheat and millet.

No. 13234—Cracked corn, oats, wheat, buckwheat, sunflower seed, etc.

No. 13237—Granulated corn, grass seed, millet, cracked wheat, cracked Kaffir corn, flaxseed, etc.

No. 13238—Cracked corn, oats, Kaffir corn, wheat, sunflower seed, etc.

No. 13239—Buckwheat, cracked corn, oyster shells, cracked peas, oats, Kaffir corn, flaxseed, etc.

No. 13240—Granulated corn, cracked Kaffir corn, millet, etc.

No. 13255—Wheat, crushed stone, oyster shells, buckwheat, barley, millet, Kaffir corn, etc.

No. 13257—Wheat, crushed rock, hempseed, peas, millet, cracked corn, buckwheat, etc.

No. 13258—Cracked corn, beef scrap, Kaffir corn, wheat, barley, millet, cracked peas, buckwheat, charcoal, beet seed and sunflower seed.

No. 13260—Granulated corn, cracked Kaffir corn, cracked wheat, millet, beef scrap, grass seed, etc.

No. 13275—Cracked corn, cracked wheat, millet, crushed rock, cracked Kaffir corn, charcoal, etc.

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Agricultural, Horticultural, Chemical, Mechanical And Civil Engineering, General Science

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